In this worksheet you will learn how to solve and graph inequalities on the number line so that you can visualise solutions.

Easy Questions

1. Solve $x + 3 > 7$. Then, graph the solution on a number line.
2. Solve $2x \geq 4$. Then, graph the solution on a number line.
3. Solve $-x < 3$. Then, graph the solution on a number line.
4. Solve $3 - x \leq 5$. Then, graph the solution on a number line.
5. Solve $x - 2 \geq 0$. Then, graph the solution on a number line.

Intermediate Questions

6. Solve $2(x - 1) > 4$. Then, graph the solution on a number line.
7. Solve $3x + 2 < 2x + 5$.
8. Solve $-2x + 3 \leq 7$.
9. Solve $\frac{x}{2} > 3$.
10. Solve $5 - x < 2$.
11. Solve the compound inequality $2 < 3x + 1 \leq 8$.
12. Solve $4x - 7 \geq 2x + 1$.
13. Solve $-3x + 4 > 1$.
14. Solve $x + 4 \leq 2x - 3$.
15. Solve $5x + 6 > 3x + 10$.
16. Graph the inequality $x < 4$ on a number line.
17. Graph the inequality $x \geq -2$ on a number line.
18. Solve $\frac{2}{3}x + 1 < 3$.
19. Solve $-\frac{1}{2}x + 4 \geq 2$.
20. Solve $3(x - 2) \leq 9$. Then, graph the solution on a number line.

Hard Questions

21. Solve $-2(x-3) < 4 - x$. Then, graph the solution on a number line.
22. Solve the compound inequality $-3 < 2x - 1 \leq 7$.
23. Solve $5 - 2(x+1) \geq x$.
24. Solve $\dfrac{3x-1}{2} < \dfrac{4x+2}{3}$.
25. Solve $\dfrac{2-x}{3} \leq \dfrac{x+1}{4}$.
26. Solve $2x + 3 \geq 7$. Then, graph the solution on a number line.
27. Solve $-4(x-2) > 2x - 6$.
28. Solve $4 - 3(2-x) \leq 5$.
29. Solve $7 - \dfrac{x}{2} > 3$.
30. Solve the compound inequality $1 \leq 2 - x < 5$.